**REMARKS** 

Claims 1 and 3-13 remain in the application. Independent claims 1, 5 and 9 were

amended to include the following elements:

instrumentation computing a cost for each selectable implementation for at least one use

of the component during said partial run, said computation being based on the current state of the

run; and

based on the cost, selecting at runtime one of the plurality of selectable implementations

for a subsequent at least partial run of the computer program, said one of the plurality of

selectable implementations selected being the one with the lowest cost.

**CLAIM REJECTIONS UNDER 35 USC §101** 

The Office Action rejected claims 5-11 and 13 under 35 USC §101 as not limited to

statutory embodiments. Claim 5 has been amended to recite a computer readable storage

medium. Support for this amendment is found at page 22, lines 1-2 of the specification.

Applicant submits that the emended claim recites statutory subject matter. Claim 9 has been

amended to specify that the computer system comprises a processor for running a method.

Support for this amendment is found at page 20, lines 19-21 of the specification.

**CLAIM REJECTIONS UNDER 35 USC §112** 

Claim 1 has been amended to correct the antecedent basis issue.

CLAIM REJECTIONS UNDER 35 USC §103

The Office Action rejected claims 1-13 under 35 USC 103(a) as being unpatentable

over "Dynamic Program Monitoring and Transformation Using the OMOS Object Server" by

6

Orr et al. ("Dynamic Program Monitoring") in view of "Program Specialization Using the

OMOS System" by Orr et al. ("Program Specialization").

The claims differ from the cited combination because the combination of "Dynamic

Program Monitoring" and "Program Specialization" only comprises "logs information about

entry and exit to the procedure," "construct a dynamic call graph of the program from the event

log file", and "a node for each instance of a procedure that is called, and an arc from the caller to

the callee" (all on page 236 of "Dynamic Program Monitoring"). The cited combination does not

capture, and does no cost computation based on, the current state of the run at entry to a

procedure or use of a component, as required by the amended claims.

The claimed cost computation, for each implementation, for at least one use of the

component, takes into account the current state of the run. An example of current state is: the

size of data in the abstract state of the object. An example of abstract state is: the size / number

of elements in a data collection regardless of whether it is implemented with a tree or a hash

table or list. The claimed cost computation also takes into account the parameters (argument

values) of the procedure call or use of the component. Due to the fact that the claimed cost

computation is based on the current state of the run, the computed cost for a call of a particular

procedure or invocation of a given operation / method of a given implementation can vary

depending on the current state of the run. For example, the more elements there currently are in a

collection, the greater the cost can be of inserting another element into that collection; and that

cost can be greater or not as great depending on the particular implementation. The cited

combination does not take this into account and hence the cost computed by the cited

7

combination never varies. The cited combination will compute an identical cost for all calls of a

particular procedure or invocations of a given operation / method of a given implementation.

This is inadequate for purposes of the claimed invention.

In the amendment filed on April 3, 2007 Applicants pointed out that the cited

references actually constitute objective evidence of non-obviousness (i.e., failure of others).

The Final Office Action ignored this evidence. Applicant urges the Examiner to consider the

objective indicia of non-obviousness. Objective evidence of non-obviousness *must* be considered

when present (as here). Hybritech inc. v. Monoclonal Antibodies, Inc. 802 F.2d 1367 (Fed. Cir.

1986).

Claims 3-4 and 12-13 are dependent on claim 1 and are patentable for at least the

foregoing reasons.

Claim 5 is an article of manufacture counterpart of claim 1 and is patentable for the

foregoing reasons.

Claims 6-8 are dependent on claim 5 and are patentable for at least the same reasons.

Claim 9 is a computer system that comprises limitations substantially the same as

those argued above.

Claims 10 and 11 depend on claim 9 and are patentable for at least the same reasons

as claim 9 is patentable.

8

Serial Number 10/073630 Docket Number YOR920020023US1 Amendment after Final Page 9 of 9

For the foregoing reasons, Applicant respectfully requests reconsideration and allowance of the pending claims.

Respectfully submitted,

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